EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	10/586826	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 17:05
L2	36	oxirane and carbonylation and lactone	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 18:25
L3	483	carbonylation and epoxide	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 19:29
L4	446	carbonylation and epoxide and catalyst	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 17:11
L5	146	carbonylation and epoxide and catalyst and lactone	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 18:24
L6	671	549/263 549/328 556/27 502/161	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 18:25
L7	7	l6 and oxirane and carbonylation and lactone	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 18:25

EAST Search History

L8	26	l6 and carbonylation and lactone	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 18:41
L9	3	l8 and oxazoline	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 18:41
L10	15	l6 and carbonylation and epoxide	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 19:44
L11	3	"6852865"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/15 19:45

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NEWS	3	JUL 02	SCISEARCH enhanced with complete author names
NEWS	4	JUL 02	CHEMCATS accession numbers revised
NEWS	5	JUL 02	CA/CAplus enhanced with utility model patents from China
NEWS	6	JUL 16	CAplus enhanced with French and German abstracts
NEWS	7	JUL 18	CA/CAplus patent coverage enhanced
NEWS	8	JUL 26	USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS	9	JUL 30	USGENE now available on STN
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NEWS	11	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	12	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents
NEWS	13	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS	14	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	15	AUG 27	USPATOLD now available on STN
NEWS	16	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	17	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	18	SEP 13	FORIS renamed to SOFIS
NEWS	19	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	20	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS	21	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS	22	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	23	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	24	OCT 19	BEILSTEIN updated with new compounds
NEWS	25	NOV 15	Derwent Indian patent publication number format enhanced

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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FILE LAST UPDATED: 14 Nov 2007  (20071114/ED)

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=> s carbonylation and (catalytic or catalyst) and (epoxide or oxirane) and lactone
         12211 CARBONYLATION
           202 CARBONYLATIONS
         12248 CARBONYLATION
                 (CARBONYLATION OR CARBONYLATIONS)
        440071 CATALYTIC
             6 CATALYTICS
        440075 CATALYTIC
                 (CATALYTIC OR CATALYTICS)
        781860 CATALYST
        779218 CATALYSTS
        999850 CATALYST
                 (CATALYST OR CATALYSTS)
         50488 EPOXIDE
         29116 EPOXIDES
         65704 EPOXIDE
                 (EPOXIDE OR EPOXIDES)
         19662 OXIRANE
          2791 OXIRANES
         20602 OXIRANE
                 (OXIRANE OR OXIRANES)
         60367 LACTONE
         28333 LACTONES
         72199 LACTONE
                 (LACTONE OR LACTONES)
L1          45 CARBONYLATION AND (CATALYTIC OR CATALYST) AND (EPOXIDE OR OXIRAN
               E) AND LACTONE

=> s l1 and "transition metal"
       1012684 "TRANSITION"
        268061 "TRANSITIONS"
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       1127567 "TRANSITION"
                 ("TRANSITION" OR "TRANSITIONS")
       1787683 "METAL"
        892142 "METALS"
       2162601 "METAL"
                 ("METAL" OR "METALS")
        190089 "TRANSITION METAL"
                 ("TRANSITION"(W)"METAL")
L2           7 L1 AND "TRANSITION METAL"

=> s l1 and chiral
        119479 CHIRAL
            17 CHIRALS
        119483 CHIRAL
                 (CHIRAL OR CHIRALS)
L3           8 L1 AND CHIRAL

=> s l2 and l3
L4           3 L2 AND L3

=> s l2 or l3
L5          12 L2 OR L3

=> d l5 1-21 abs ibib hitstr
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L5 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB The use of mechanistic information to develop a new, catalytic multicomponent reaction is described. The complex {(salph)Al(THF)2}+[Co(CO)4]- (1, salph = N,N'-o-phenylenebis(3,5-di-tert-butylsalicylideneimine), THF = tetrahydrofuran), which is known to carbonylate epoxides, aziridines, and β- lactones, was used to catalyze the synthesis of 1,3-oxazinane-2,4-diones from epoxides, isocyanates, and CO. Under optimized conditions, the reaction was both selective and high-yielding. 1,3-Oxazinane-2,4-diones were synthesized from a variety of epoxides and isocyanates, including some epoxides that do not undergo simple ring-expansion carbonylation. The best results were obtained using highly electrophilic isocyanates. The mechanism of the multicomponent reaction was investigated using labeling and stereochem., and the data obtained were consistent with the 1-catalyzed formation of β- lactone and 1,3-oxazinane-2,4-dione from a common intermediate.

ACCESSION NUMBER: 2007:629318 CAPLUS
DOCUMENT NUMBER: 147:235098
TITLE: A New Multicomponent Reaction Catalyzed by a {Lewis Acid}+{Co(CO)4}- Catalyst: Stereospecific Synthesis of 1,3-Oxazinane-2,4-diones from Epoxides, Isocyanates, and CO
AUTHOR(S): Church, Tamara L.; Byrne, Christopher M.; Lobkovsky, Emil B.; Coates, Geoffrey W.
CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Baker Laboratory, Cornell University, Ithaca, NY, 14853-1301, USA
SOURCE: Journal of the American Chemical Society (2007), 129(26), 8156-8162
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:235098
REFERENCE COUNT: 75 THERE ARE 75 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB A review of online ATR-IR spectroscopy as a powerful anal. tool for the elucidation of reaction mechanisms is presented. Recent studies have focused on the examination of the Co catalyzed carbonylation reaction of epoxides to lactones, which are attractive substrates for further applications. One interesting conversion is the ring opening polymerization (ROP) to form aliphatic polyesters such as poly(3-hydroxybutyrate) (PHB). This type of polymers is also produced naturally by microorganisms. They are known to be biodegradable as well as biocompatible and offer excellent mech. properties. However, due to the higher expense associated with biotechnol. processes, studies on cost-effective synthetic routes using cheap and easily available industrial monomers are of great interest. ATR-IR spectroscopy was used to monitor the carbonylation of epoxides. This method provides direct observation of the active and intermediary species formed in the autoclave. It was shown, that besides the known two-step reaction to aliphatic polyesters via a lactone intermediate, a novel route, the direct alternating copolymn. of epoxides and CO to form polyester is also feasible. This new reaction combines an epoxide ring opening reaction with a transition metal catalyzed CO insertion step.

ACCESSION NUMBER: 2006:801389 CAPLUS
DOCUMENT NUMBER: 146:184513
TITLE: Online ATR-IR spectroscopy: mechanistic studies of catalytic reactions under high-pressure
AUTHOR(S): Zintl, Manuela; Hearley, Andrew K.; Rieger, Bernhard
CORPORATE SOURCE: Division for Materials & Catalysis, University of Ulm, Ulm, D-89069, Germany
SOURCE: Leading Edge Organometallic Chemistry Research (2006), 75-92. Editor(s): Cato, Martin A. Nova Science Publishers, Inc.: Hauppauge, N. Y.
CODEN: 69IHZL; ISBN: 1-59454-853-6
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB The invention relates to a method for producing enantiomer-enriched lactones by carbonylating lactones (e.g., β-butyrolactone) into anhydrides [e.g., (S)-methylsuccinic anhydride] in the presence of a chiral catalyst system containing: (A) at least one carbonylation catalyst A comprised of neutral or anionic transition metal complexes of metals Re, Co, Ru, Rh, Ir, Fe, Ni, Mn, Mo, W, or their mixts.; and (B) at least one chiral Lewis acid B comprised of compds. of metals Mg, Ca, Sc, Y, a rare-earth element, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Al, Ga, Zr, Nb, Mo, Ru, Rh, Pd, Ag, Cd, In, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, and Pb, the compds. in the reaction conditions of the carbonylation existing in a coordinatively undersatd. manner. The enantiomer-enriched lactones are then prepared by the catalytic decarbonylation of the chiral anhydrides.

ACCESSION NUMBER: 2006:544522 CAPLUS
DOCUMENT NUMBER: 145:45926
TITLE: Stereoselective catalytic carbonylation method used in the production of enantiomer-enriched lactones
INVENTOR(S): Preishuber-Pfluegl, Peter; Molnar, Ferenc; Luinstra, Gerrit
PATENT ASSIGNEE(S): Basf A.-G., Germany
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006058681	A2	20060608	WO 2005-EP12677	20051128
WO 2006058681	A3	20060928		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: DE 2004-102004057875A 20041130

OTHER SOURCE(S): CASREACT 145:45926

L5 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB Optically active β- lactones are produced by carbonylation of oxiranes in the presence of a catalyst comprised of: (a) at least one carbonylation catalyst composed of neutral or anionic transition metal complexes of metals of groups 5 to 11 of the periodic table; (b) at least one metal compound of general formula MXxRn-x, in which: M represents an element of group 2, 3, 4, 12, 13; R represents hydrogen or a hydrocarbon radical that can be substituted both on the carbon atom bound to M as well as on the carbon atoms; X represents an anion; n is a number corresponding to the valence of M, and; x is a number ranging from 0 to n, and (c) at least one organic, chiral compound having fewer than 4 coordination sites. In a typical example oxirane was carbonylated with CO in the presence of NaCo(CO)4, Me2AlCl and 2,2'-methylenebis[(4R,5S)-4,5-diphenyl]-2-oxazoline to give 5-butyrolactone at ee 1.6%.

ACCESSION NUMBER: 2005:673283 CAPLUS
DOCUMENT NUMBER: 143:155303
TITLE: Catalyst for the carbonylation of oxiranes
INVENTOR(S): Ferenc, Molnar; Preishuber-Pfluegl, Peter
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005068449	A1	20050728	WO 2005-EP534	20050120

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 102004002875	A1	20051006	DE 2004-102004002875	20040120
US 2007161806	A1	20070712	US 2006-586826	20060808

PRIORITY APPLN. INFO.: DE 2004-102004002875A 20040120
WO 2005-EP534 W 20050120

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB Enantiomer-enriched mixts. of 4-member-ring lactones, used for the manufacture of biodegradable polyesters, were manufactured by catalytic carbonylation of racemic oxiranes in the presence of catalyst system comprising (a) neutral or anionic transition metal complex of a group V-XI metal, and (b) a chiral Lewis acid, with a proviso. For example, a solution prepared by adding 0.39 mmol (1R,2R)-(-)-[1,2-cyclohexanediamino-N,N'-bis(3,5-di-tert-butylsalicylidene)]chromium(III) chloride to a cooled (0°) mixture of 0.39 mmol Na[Co(CO)4] and 8 mL racemic propylene oxide under Ar was pressurized with 60-65 bar CO in an autoclave and the reaction carried out for 1/2 h at ≤25° to give 25% conversion of propylene oxide into β-butyrolactone comprising 8% enantiomeric excess of S-β-butyrolactone. This (2.0 g) was kept for 1 wk at ambient temperature with 10.4 mg tetrahexylammonium acetate to give 369 mg poly(hydroxybutyrate).

ACCESSION NUMBER: 2004:117167 CAPLUS
DOCUMENT NUMBER: 140:164342
TITLE: Catalyst and procedure for carbonylation of oxiranes to lactones
INVENTOR(S): Luinstra, Gerrit; Rieger, Bernhard; Allmendinger, Markus
PATENT ASSIGNEE(S): BASF AG, Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10235316	A1	20040212	DE 2002-10235316	20020801
WO 2004012861	A1	20040212	WO 2003-EP8478	20030731
W: JP, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
EP 1558385	A1	20050803	EP 2003-766379	20030731
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
JP 2006500338	T	20060105	JP 2004-525399	20030731
US 2005240032	A1	20051027	US 2005-523264	20050307
US 7145022	B2	20061205		

PRIORITY APPLN. INFO.: DE 2002-10235316 A 20020801
WO 2003-EP8478 W 20030731

OTHER SOURCE(S): MARPAT 140:164342

L5 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB Epoxides, aziridines, thiiranes, oxetanes, lactones, lactams and analogous compds. are reacted with carbon monoxide in the presence of a catalytically effective amount of catalyst having the general formula [Lewis acid]z+([QM(CO)x]w-)y (Q is any ligand and need not be present, M is a transition metal selected from the group consisting of Groups 4, 5, 6, 7, 8, 9 and 10 of the periodic table of elements, z is the valence of the Lewis acid and ranges from 1 to 6, w is the charge of the metal carbonyl and ranges from 1 to 4 and y is a number such that w times y equals z, and x is a number such as to provide a stable anionic metal carbonyl for ([QM(CO)x]w-)y and ranges from 1 to 9 and typically from 1 to 4) to give carbonylation products which are useful for polymer manufacture The carbonylation products are useful as hydroxycarboxylic acids for polymer preparation, etc.

ACCESSION NUMBER: 2003:472541 CAPLUS
DOCUMENT NUMBER: 139:54560
TITLE: Catalytic carbonylation of three and four membered heterocycles
INVENTOR(S): Coates, Geoffrey W.; Getzler, Yutan D. Y. L.; Wolczanski, Peter; Mahadevan, Viswanath
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., USA
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003050154	A2	20030619	WO 2002-US36140	20021202
WO 2003050154	A3	20031120		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002356929	A1	20030623	AU 2002-356929	20021202
US 2003162961	A1	20030828	US 2002-307520	20021202
US 6852865	B2	20050208		
EP 1461315	A2	20040929	EP 2002-804688	20021202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005511753	T	20050428	JP 2003-551177	20021202

PRIORITY APPLN. INFO.: US 2001-336170P P 20011206
WO 2002-US36140 W 20021202

OTHER SOURCE(S): CASREACT 139:54560; MARPAT 139:54560

L5 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB A palladium(II)-catalyzed hydroxycyclization-carbonylation -lactonization sequence with appropriate pent-4-ene-1,3-diols provides efficient access to the bicyclic γ- lactones, 5-n-butyl- and 5-n-hexyltetrahydrofuro[3,2-b]furan-2(3H)-ones, in both racemic and enantiomeric forms. Some of the substrate pent-4-ene-1,3-diols of high enantiomeric excess (ee) have been derived from racemic terminal epoxides by hydrolytic kinetic resolution (HKR) using cobalt (III)-salen complexes. (9Z,12R)-(+)-Ricinoleic acid also serves as a " chiral pool" source of other pent-4-ene-1,3-diols. These syntheses and enantioselective gas chromatog. confirm the structures and absolute stereochem. of the lactones in some species of parasitic wasps (Hymenoptera: Braconidae). The highly abundant 5-n-hexyltetrahydrofuro-[3,2-b]furan-2(3H)-one in Diachasmimorpha kraussii and D. longicaudata is of high ee (>99%) with (3aR,5R,6aR) stereochem.

ACCESSION NUMBER: 2001:777088 CAPLUS
DOCUMENT NUMBER: 136:19971
TITLE: Synthesis and stereochemistry of some bicyclic γ- lactones from parasitic wasps (Hymenoptera: Braconidae). Utility of hydrolytic kinetic resolution of epoxides and palladium(II)-catalyzed hydroxycyclization-carbonylation-lactonization of Ene-diols
AUTHOR(S): Paddon-Jones, Gregory C.; McErlean, Christopher S. P.; Hayes, Patricia; Moore, Christopher J.; Konig, Wilfried A.; Kitching, William
CORPORATE SOURCE: Department of Chemistry, University of Queensland, Brisbane, Q. 4072, Australia
SOURCE: Journal of Organic Chemistry (2001), 66(22), 7487-7495
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:19971
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

AB Direct incorporation of carbon monoxide into a heterocyclic ring and intramol. cyclocarbonylation are two useful strategies for the synthesis of lactams, lactones, and thiolactones by homogeneous catalysis. Excellent regio and stereoselectivity can be attained in many cases. Three- and four-membered ring heterocycles (e.g., aziridines, epoxides, azetidines) react with heterocumulenes (carbodiimides, isocyanates, isothiocyanates) in the presence of a palladium catalyst to form five- and six-membered ring heterocycles. Use of a chiral ligand in these reactions results in product formation in high enantiomeric excess.

ACCESSION NUMBER: 1998:530576 CAPLUS
TITLE: Metal catalyzed carbonylation and cycloaddition reactions.
AUTHOR(S): Alper, Howard
CORPORATE SOURCE: Department Chemistry, University Ottawa, Ottawa, ON, K1N6N5, Can.
SOURCE: Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27 (1998), ORGN-213. American Chemical Society: Washington, D. C.
CODEN: 66KYA2
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

L5 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN
AB A review with 26 refs.
ACCESSION NUMBER: 1988:630650 CAPLUS
DOCUMENT NUMBER: 109:230650
TITLE: Metal catalyzed carbonylation and oxidation-reduction reactions
AUTHOR(S): Alper, Howard
CORPORATE SOURCE: Dep. Chem., Univ. Ottawa, Ottawa, ON, K1N 9B4, Can.
SOURCE: Pure and Applied Chemistry (1988), 60(1), 35-8
CODEN: PACHAS; ISSN: 0033-4545
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

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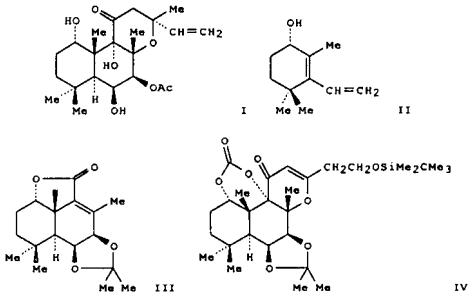

AB (±)-Forskolin (I), a point activator of adenylate cyclase, was prepared from vinylcyclohexenol II and p-MeC6H4SO2C.tplbond.CCO2H via lactone III and pyranone IV.
ACCESSION NUMBER: 1988:406761 CAPLUS
DOCUMENT NUMBER: 109:6761
TITLE: Total synthesis of (±)-forskolin
AUTHOR(S): Corey, E. J.; Jardine, Paul da Silva; Rohloff, John C.
CORPORATE SOURCE: Dep. Chem., Harvard Univ., Cambridge, MA, 02138, USA
SOURCE: Journal of the American Chemical Society (1988), 110(11), 3672-3
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:6761

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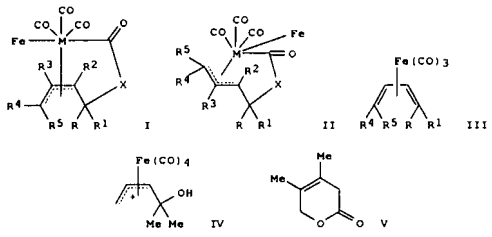

AB The transition metal-assisted carbonylation of vinyloxiranes to unsatd. δ- lactones was verified and studied mechanistically by use of organometallic model reactions. The light induced complexation of vinyloxiranes by Fe(CO)5 was a multistep reaction in which diastereoisomeric cis- (I) and trans-ferralactones (II) (R-R5 = H, Me; X = O) were formed. I and II (X = O, R = R1 = R4 = R5 = Me, R2 = R3 = H) were characterized crystallog. and studied chemical concerning their reactions with nucleophiles and electrophiles. Reaction of II and III (X = O) with MeNH2 gave ferralactams I and II (X = NMe) by migration of the allyl group and inversion at C-1 as well as C-4 indicating an attack of amine at the exo-position of C-4. The reaction of ferralactones with OH- gave CO32- and diene complexes III (R, R1, R4, R5 = H, Me) with inversion at C-1 only, indicating that the reaction had been initiated by attack of HO- at a terminal carbonyl group. On electrophilic attack ferralactones form allyl cations, e.g., IV by opening of the CO-O bond. Carbonylation of ferralactones with CO in aprotic solvents gave good yields of unsatd. δ lactones, e.g., V.
ACCESSION NUMBER: 1980:111134 CAPLUS
DOCUMENT NUMBER: 92:111134
TITLE: Organic syntheses using transition metal complexes. 8. Studies on the synthesis of unsaturated δ- lactones by cyclocarbonylation of vinyloxiranes with transition metal complexes
AUTHOR(S): Aumann, Rudolf; Ring, Horst; Krueger, Carl; Goddard, R.
CORPORATE SOURCE: Org.-Chem. Inst., Univ. Muenster, Muenster, D-4400, Fed. Rep. Ger.
SOURCE: Chemische Berichte (1979), 112(11), 3644-71
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 92:111134

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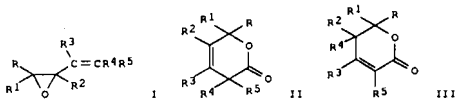

AB Vinyloxiranes I reacted with CO to give the lactones II in the presence of Rh catalysts and III with Fe or Co catalysts, with deoxygenation, polymerization, and isomerization to unsatd. open-chain ketones as side reactions. R1 = alkyl promoted lactone formation, whereas R3 = CO2Me led to almost quant. deoxygenation. R = R3 = alkyl gave open-chain ketones. Thus, isoprene oxide reacted with CO in the presence of (1,5-cyclooctadiene-RhCl)2 to give 75% II (R = R1 = R3 = R4 = R5 = H, R2 = Me).
ACCESSION NUMBER: 1977:71855 CAPLUS
DOCUMENT NUMBER: 86:71855
TITLE: Organic syntheses with transition metal complexes. 5. δ- Lactones by carbonylation of vinyl oxiranes
AUTHOR(S): Aumann, Rudolf; Ring, Horst
CORPORATE SOURCE: Org. Chem. Inst., Univ. Muenster, Muenster, Fed. Rep. Ger.
SOURCE: Angewandte Chemie (1977), 89(1), 47-8
CODEN: ANCEAD; ISSN: 0044-8249
DOCUMENT TYPE: Journal
LANGUAGE: German

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